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ABSTRACT

To provide a context for a discussion of parental modernity and child development, this paper explores concepts of societal and individual modernity and examines historical evidence of increasing levels of intellectual competence and an active orientation in the conduct of life. Specific attention is given to sociological theories of Bell (1973) and Etzioni (1968). Beliefs, values, and behaviors are discussed that can be interpreted as parental modernity, and the correlation of parental modernity with parent education and child academic competence is examined. Additionally, a summary is offered of cross-sectional and longitudinal research on correlations between parental modernity and child academic competence. Findings reveal that maternal cognitive orientations, cognitive skills, behavior with interviewer, and behavior with child intercorrelate with and predict child competence. Implications of the analysis and findings for influencing academic competence of adults and children are suggested. Vygotsky's (1978) discussion of internalization of higher psychological processes is seen as providing a theoretical basis for interpreting parent variables as influencing children's development of academic competence. (RH)

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Prediction of Child Academic Competence from Maternal Modernity During Infancy

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Prediction of Child Academic Competence from Maternal Modernity During Infancy

Earl S. Schaefer

Integrating analyses of the historical development of the culture with analyses of development of individuals may contribute to an emerging ecological perspective on development. This perspective, supported by historical trends in societal and individual development, reveals the potential for further development of society and of individuals. To provide a context for a discussion of parental modernity and child development, I will discuss concepts of societal modernity and individual modernity, and historical evidence for increasing levels of an active orientation and intellectual competence. I will discuss beliefs, values and behaviors that can be interpreted as parental modernity and the correlation of parental modernity with parent education and child academic competence. I will briefly summarize my cross-sectional and longitudinal research on the correlations of parental modernity with child academic competence. Implications of this analysis for influencing academic competence of adults and children will be suggested.

Among the sociological analyses of modern society, Bell's (1973) theoretical analysis of "The Coming of Post-Industrial Society" has contributed greatly to description of the knowledge or the information society. His "General Schema of Social Change" listed characteristic emphases of pre-industrial, industrial, and post-industrial society. For example, the economic sector for the pre-industrial society is described as agriculture, mining, fishing and timber while the economic sector of post-industrial society has extensively developed health, education, research and government. Technology is seen as changing from

processing raw materials to processing information with the occupational slope is seen as changing from farmer, fisherman, miner, and unskilled worker to professionals, technicians, and scientists. Design emphases are seen as evolving from a game against nature to a game between persons. Bell, describes the axial principal of modern society as the centrality and codification of theoretical knowledge. According to Bell, primary institutions of modern society are seen as the university, academic institutes, and research corporations, the primary resource is human capital, and major political problems include science and education policy. The basis of social stratification is seen as skill and access as provided by education. His description of changes in education, science, and technology during the period from World War II to 1970 provides empirical evidence to support his theoretical analysis.

Bell's primary emphasis on the role of knowledge in modern society is usefully complemented by Etzioni's (1968) emphasis on an active orientation in "The active society: A theory of societal and political processes." Etzioni begins his analysis with a contrast between a "central concept of man...as a passive observer in a world not of his making and not under his control" and man as an active self in an active society. Although Etzioni recognizes the role of knowledge in society, his major focus is on "the realm of action and its laws." Etzioni's theoretical analysis of the active orientation states:

> "Whereas the capacity to act is in itself an inherent part of human potential, the extent of the capacity is historically bound (p. 25). Man as an active creature has a capacity to project himself

> into the future by projecting a future and by pulling himself toward it. In the process he changes both his environment and himself (p. 32).

Etzioni's (1968, p. 35) description of the role of knowledge in the active society states: "Symbols gain a role in social action precisely because they are 'energized'--command psychic and social resources, including control of objects" (p. 35). Etzioni's foundation for a theory of action described "...the assumptions on which the capacity to act and to control rest...and the key conceptions a theory of action and control can build upon" (p. 36). Bell's (1973) analysis of post-industrial, knowledge society complements Etzioni's (1968) analysis of the active society, as a psychological analysis of cognition or intelligence complements an analysis of conation or motivation. Development of society is predicated upon an active society as well as a knowledge society and both are correlated with levels of education. In this analysis I suggest that development of the individual child and of society can be fostered by increasing active participation of parent and child.

What are the characteristics of the modern individual who participates actively in modern society? A psychological response might specify individuals with high intelligence while a sociological response might specify persons of high socio-economic status. Numerous studies report significant correlations among intelligence, education, and occupation (Miner, 1957). Personality characteristics of the modern individual are described by Inkeles and Smith (1974) in their analyses of the process of "Becoming Modern." Among the brief scales developed to measure individual modernity, a measure of information on politics and geography had the highest loading on a factor of overall

modernity. Other brief scales that had significant loadings in each of six developing nations included efficacy, nonparochial allegiance, new experience valuation, technical skill valuation, change valuation, responsibility valuation, dignity valuation, planning valuation, and women's rights. Thus, aspects of individual modernity in developing nations include knowledge and valuation of knowledge, an active orientation, and respect for rights of women and minorities. Correlates of individual modernity included education, occupation, and use of the mass media. Inkeles (1983) reported evidence of both early socialization and adult socialization of individual modernity through the family, school, workplace, and mass media. Among variables that correlated with individual modernity was the average level of modernity of the person's nation, suggesting influence from the social, cultural, and political context of the individual.

Evidence of the influence of active participation by the individual upon modernity was reported for peasant farmers who were members of a cooperative movement. Inkeles (1983) reported that in East Pakistan, after holding other influences constant, a year in school produced a gain of about 1.5 points in overall modernity while a year as a member of the co-op yielded a gain of 4 points or more. The possibility that gains were partially due to development of an active orientation is suggested by Inkeles' (1983) assumption of the importance "...of models of behavior which the cooperative instructors provided, and in part from the new principle of social organization and interpersonal relations which the cooperative exemplified" (p. 120).

Research on individual modernity in developing nations was replicated and extended by Suzman (1973) in the Negro Migration Study of

Boston. An analysis of correlates of overall modernity yielded a pattern described as psychological modernity which included vocabulary, information, comprehension, ego development level, and field independence. Demographic and socialization correlates of modernity during the preschool (0-6 years), school (6-18 years) and adult years included region of birth, family social class, urban-rural experience, education, and employment experience. Personality variables also contributed to a multiple correlation with the modernity scale when entered after demographic and socialization variables. Suzman (1973) replicated findings that area of residence, family, school, and occupation are correlated with modernity and demonstrated that modernity is highly correlated with personality characteristics of the competent person. His findings that preschool, school, and adult socialization are correlated with modernity suggest that experience throughout the life span can influence development.

The research on individual modernity by Inkeles and Smith (1974) and Suzman (1973) suggests that individual psychological modernity includes cognitive orientations--attitudes, beliefs and values--as well as cognitive skills which are correlated with the educational, economic, and cultural level of the family, region, and nation in which the individual is socialized. These findings were preceded by results of mental testing during World War I in which substantial differences in Army Alpha and Beta test scores were found by region and by race (Yerkes, 1921). An environmental interpretation of those findings is supported by the finding that blacks from several Northern states had higher mean scores than whites from several Southern states (Gould, 1981).

A conclusion that the educational, economic and cultural level of a society influences intellectual functioning is supported by research on historical changes in levels of mental test performance. Tuddenham (1948) reported substantial increases in mental test scores of United States soldiers from World War I to World War II with the mean of World War II equal to the 82 percentile of World War I. A recent analysis of changing norms on standard mental tests concluded that massive gains have occurred in mean IQs of Americans with an increase of 13.8 points from 1932 to 1978 for a rate of gain of .3 points per year (Flynn, 1984). Changes in educational, economic, cultural and political participation of blacks since 1953 contribute to the rapidly narrowing gap in white-black achievement score differences reported by Jones (1983). Similarly increases have been reported in IQ in Japan since World War II with a gain of 7 points over a 23-year period (Lynn, 1982). Gains in IQ during periods of educational and economic progress strongly support an environmental interpretation of IQ differences between national and racial groups.

Twentieth century increases in cultural and intellectual development may be paralleled by historical increases in an active orientation. Jaynes' (1977) analysis of the "Origin of Consciousness" emphasized a growing awareness of individual autonomy and responsibility during the development of Greek civilization. The myth of Prometheus reflects awareness of individual responsibility and of the role of creative innovation in the development of Greek culture. Different levels of consciousness, of moral development, and of intellectual development that emerge during the development of a culture are paralleled by the development of the individual, which is shaped by the cultural context of the family, school, and society.

The active orientation that is typical of a modern society and of the modern individual is also characteristics of the academically competent child (Schaefer, 1981; Schaefer, Edgerton, & Hunter, 1983). Mental test scores and teacher ratings of verbal intelligence of children are substantially correlated with teacher ratings of curiosity, creativity, instrumental independence and task-orientation. The high correlation of intrinsic motivation with academic competence of the child supports the importance of an active, participant role for children as well as adults.

Development of my concept of parental modernity began with a study of parent progressive, democratic versus traditional, authoritarian childrearing and educational beliefs (Schaefer & Edgerton, 1981, in press). Scales that had substantial factor loadings on a factor of authoritarian beliefs included "absolute authority of parent and teacher," "children are born bad and will misbehave if allowed," "children learn passively and should be treated uniformly," and "the aim of education is to instill information." Scales that loaded on a factor of progressive, democratic beliefs included "parents should encourage expression of the child's ideas," "children learn actively, and the aim of education is learning how to learn." Authoritarian beliefs were significantly correlated with Kohn's (1969) conforming versus self-directing values for children of obedience, politeness, and manners as contrasted with independent thinking, curiosity and imagination. Parent democratic beliefs and self-directing values were positively correlated, and parent authoritarian beliefs and conforming values were negatively correlated, with parent education and with child verbal intelligence and curiosity/creativity. The cognitive

skills and cognitive orientations characteristic of the modern individual suggested the concept of parental modernity to describe the childrearing beliefs, values, and behaviors of the parent that promote comptence of the child. An active orientation that is a major component of the active modern society, of the modern individual, and of tne competent child would be promoted by the progressive, democratic childbearing beliefs and self-directing values of the modern parent.

Our original measure of parental modernity in childrearing and education beliefs was developed and cross-validated in three samples, for white and black parents, and for fathers as well as mothers (Schaefer & Edgerton, 1981). However, a more comprehensive view of characteristics of a modern parent has been developed in an ongoing longitudinal study of low-income mothers who were interviewed during pregnancy, interviewed and observed during child care at four and twelve months postnatally, and again interviewed during the kindergarten year. Interview data on child adaptation at home were collected from 237 mothers during the kindergarten interview, and data on child social adjustment and academic competence in school were collected from teacher ratings. The pregnancy, infancy, and kindergarten interviews with the mother and the observations of maternal behavior during child care have been analyzed to determine demographic and psychological characteristics of the modern parent and correlations of those characteristics with child adaptation.

The major demographic correlate of parental modernity during infancy was mother's education, with lower correlations with income and majority group membership. A cluster of infancy indicators of parental modernity, included receptive vocabulary, internal locus of control, self-directing versus conforming values for children, and

maternal cooperativeness with the interviewer. These measures were significantly correlated with observations and ratings of mothers' interaction, stimulation and achievement press during infant care. Each of these maternal measures was significantly correlated with teacher ratings of child verbal intelligence and curiosity/creativity in kindergarten (Schaefer & Hunter, 1983). Maternal academic competence, revealed by education and receptive vocabulary, and maternal active orientation, revealed by beliefs and behavior, were correlated with child academic competence in kindergarten. Mother's education, receptive vocabulary, cooperativeness with the interviewer and interaction with the infant each contributed significantly to a multiple regression analysis of infancy predictors of child academic competence in kindergarten.

Analyses of correlations of maternal kindergarten interview variables with teacher ratings of child competence replicated and extended those findings. Maternal locus of control, self-directing versus conforming values for children, overall modernity, parental modernity in childrearing and educational beliefs, and interviewer ratings of mother's cooperativeness and language skills were each significantly correlated with teacher ratings of verbal intelligence and curiosity/creativity (Schaefer, Edgerton, & Hunter, 1983). Mother's reports of providing educational experiences in the family and community, talking with the child, and of teaching academic skills at earlier ages were also correlated with child competence. Psychosocial environment indices for infancy and kindergarten derived from the sum of equally weighted maternal characteristics showed substantial stability from infancy to kindergarten as well as significant correlations with child competence. Measures of maternal cognitive orientations, cognitive

skills, and behavior with interviewer and with child were intercorrelated and were stable predictors of child competence.

An emphasis on knowledge as the basis of modern society has contributed to an emphasis in education on acquiring knowledge or information. A change in emphasis is needed that would encourage the development of the active orientation that is a characteristic of a modern society and individual, the effective parent, and competent child. Vygotsky's (1978) discussion of voluntary activity and of speech and practical activity as influencing intellectual development suggests the need for understanding the importance of an active orientation in education.

Similarly an emphasis on an active society as well as a knowledge society is needed to provide a basis for further development of technology and science. Historical differences in consciousness of self-direction of behavior (Jaynes, 1977) may be paralleled by cross-cultural differences in an active versus passive orientation (Diaz-Guerrero, 1981) by differences among adults in beliefs of efficacy (Inkeles and Smith, 1974) and locus of control (Rotter, 1966), and differences in childrearing and educational beliefs (Schaefer & Edgerton, 1981), values (Kohn, 1969) and behaviors of parents and teachers.

An emphasis on formal schooling in a professional and institutional paradigm in education should be complemented by an emphasis on the active role of parents and children. Increasing consciousness of parent and child active roles in education and of parent and child rights and responsibilities would contribute to an active orientation and to active participation in the family, school and society, to individual and societal modernity, and to child academic competence.

Recent increases in mental test scores of black children and adolescents may be related to the civil rights movement that contributed to changes in economic, political, and cultural as well as educational participation by blacks. Both the civil rights and women's movements which have contributed to consciousness of individual autonomy and efficacy may be contributing to greater participation by blacks and women in higher education and politics. Awareness of the parental role in education and of parent rights and responsibilities would encourage parents' active participation in education and contribute to academic competence of children. Increases in an active orientation of parents and children may be necessary to foster higher levels of intellectual development and academic achievement.

A theoretical basis for interpreting parent variables as influencing the child's development of academic competence is provided by Vygotsky's (1978) discussion of the internalization of the higher psychological processes. Vygotsky states that interpersonal processes are transformed into intrapersonal cognitive processes through a continuing series of developmental events. Both parent knowledge and the active orientation of the parent contribute to the parent-child dialogue that fosters academic competence. Parent-child interaction promotes development of verbal intelligence of the child including vocabulary, information, comprehension, assimilation, and generalization of ideas as well as the development of instrumental independence, task-orientation, curiosity and creativity.

Although this research has focussed on the role of the parent, both parent-centered and child-centered interventions have provided empirical evidence of the effectiveness of adult-child dialogue in promoting intellectual development and academic achievement. Both

increases in child mental test scores during early intervention and decreases in those scores after termination of intervention support the need for early and continuing adult-child interaction to promote development. Evidence of the effects of early childhood, late childhood, and adult socialization on the development of individual psychological modernity (Inkeles, 1983; Suzman, 1973) supports the need for early and continued education in the family, school, and community. Knowledge and the active orientation that are characteristic of a modern society and modern individual are paralleled by the cognitive skills and active orientation of the effective modern parent and of the academically competent child.

The importance of an active orientation for society and the individual, parent and child, suggests that education has been too narrowly focussed on transmission of skills, information, and knowledge. Perhaps a greater emphasis on developing the cognitive orientations--beliefs, attitudes, values, and expectancies--that contribute to an active orientation is needed for further progress. Inkeles' (1983) findings that individual modernity increases through participation in cooperatives in Pakistan suggest the need to promote active participation to promote development. Progressive, democratic childrearing and educational beliefs and parent values of self-direction for children, that are correlated with an interactive dialogue between parent and child, foster both intrinsic motivation and verbal intelligence of the child.

Typically, parent behavior is not guided by an explicit curriculum but is substantially correlated with parent childrearing and educational beliefs and values. The question might be asked, "Do effective child caregivers and teachers have similar cognitive orientations?"

Dewey's (1916) writing about progressive educational beliefs and practices (Brown, 1968) contributed to the analysis of parental beliefs that are correlated with child intellectual development. In selecting child care and education personnel, shouldn't we be assessing the beliefs, values, and the active orientations of teachers as well as their knowledge, skills, and educational credentials? Can we select child caregivers, and teachers who develop intrinsic motivation as well as academic skills? Can we train parents, caregivers, and teachers in the cognitive orientations and behaviors that contribute to an active orientation as well as cognitive skills?

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